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FORT LIARD ARCHAEOLOGICAL PROJECT

INVESTIGATIONS OF EARLY NEW WORLD MIGRATIONS IN THE FORT LIARD REGION N.W.T.

1967 SEASON

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FORT LIARD ARCHAEOLOGICAL PROJECT

INVESTIGATIONS OF EARLY NEW WORLD MIGRATIONS IN THE FORT LIARD REGION, N.W.T.

1967 SEASON

INSTITUTION:

Department of Archaeology
University of Calgary

PROJECT SPONSOR

Dr. R. S. MacNeish
Head, Department of Archaeology
University of Calgary

PRINCIPAL INVESTIGATOR

J.F.V. Millar
Graduate Student of Archaeology
University of Calgary

AREA

Field work will be in the Fort Liard area of the Northwest Territories with excavation of five sites.

TIME

May through September, 1967

22276

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ABSTRACT

This proposal covers the second and final year of the Fort Liard Archaeological Project. The 1966 project showed that the area had been occupied by a succession of cultures throughout the post-glacial period. This unique physiographic, geographic and ecological area was visited by man very shortly following the Laurentide glacial retreat from its maximum extent. This must have occurred sometime before 18,000 B.C. The earliest material and the suceeding two complexes show affinities toward the north and ultimately to the Palaeolithic of Siberia. All of these three complexes were found deep in the soil profile, with chronological relationship to the draining stages of a proglacial lake. While the earliest two occupations have little similarity toward the south, the third or Cordilleran does exhibit artifactual affinities to excavated archaeological material found in the western Cordillera in the United States, Mexico, Venezuela, Peru and Argentina. Later in the post-glacial period, during a warmer, drier period the area was occupied by several successivevarieties of early plains hunters from the south. Following a return to the cooler, damper climatic conditions, a more diversified fishing, hunting, collecting people occupied the valley.

The area around Fisherman Lake has been archaeologically prolific. The 1967 season will include completion of the excavation of the most important stratified site, JcRw 3, which was commenced in 1966. This site contains three distinct components of Plano material over a well defined Cordilleran horizon and beneath microblade and Athabascan components. The program will include excavation of four other single component sites, tested during 1966. The geological and pedological field studies started in 1966 will be completed. The botanical collection will be filled out by additional specimens during the program.

PROJECT OUTLINE

During the 1966 field season the Fort Liard Archaeological Project was established in the Fisherman Lake valley. The original analysis of the 1965 preliminary survey proved to be justified by the success of the program. Two stratified sites, JcRw 8 and 3 were excavated and found to have an aggregate of 9 occupation periods, covering the late glacial and postglacial era, up to the present.

The best evidence for antiquity of human occupation of the valley is that provided by the Hughes Site, JcRw 14. Located on a high terrace, some 200 feet above the present lake level, the limited artifactual assemblage lies in the upper zone of a varved clay deposit. The artifacts were found in and beside a hearth from which two carbon samples were taken. One has been submitted by Dr. O. L. Hughes for carbon extraction and dating. The artifacts consist of 2 crude choppers and a worked flake. The hearth and artifacts were covered by a thin band of clay below about 12 inches of dry, fine, pale yellow loess.

The testing of JcRw 14 and JcRw 7, JcRw 10 and JcRw 13 established the probability that these single occupation sites can be fitted into the sequence or can provide breadth in the definition of several periods in the stratified sites.

The geological and botanical investigations were carried out as planned and will be completed during the 1967 season.

The 1966 program and the preliminary results of the program have been reported on, and a copy of that report accompanies this proposal. A tentative archaeological and geological sequence is proposed, and is summarized as follows:

The Laurentide ice sheet deposited glacial till in this section very shortly following its maximum advance and early in the withdrawal period. Subsequent to the till deposition considerable modification of the till topography was followed or accompanied by flooding by an ice frontal lake. Prior to the removal of the ice barrier with the retreat of the glacier, and during the fluctuation of water level in the lake, the terrace was occupied by hardy hunters of whom little is known until the site has been fully explored. As far as the actual time they were here, we can only speculate at between 14,000 and 20,000 B.C.

The topography around the lake suggests a fairly rapid lowering of water level, actually in two stages, with the first due to the removal of the glacial dam. The water dropped to about 70 feet above the present water level, where it was held by a glacial till dam at the outlet of the valley to the south. During this period the lake shore was occupied by people that have their only identifiable affinities with the northwest, along the Arctic coast and back into central Siberia.

The tool complex has been termed the British Mountain Tradition, and here consists of ovate flaked choppers, unifacial scraping tools made from flakes struck from prepared cores having prepared striking platforms. It is known that this material assemblage had a long tenure in the Old World and it is possible that these people had a technology related to the earlier occupants of the upper terrace.

The glacial dam eventually broke due to erosion from the south and the Liard valley, where the river was deepening its post-glacial channel. The lake level then dropped to its present level which has been maintained apart from minor fluctuations. During the early stages of the new lake level another group retaining much of its Siberian heritage passed through the valley and camped at the northwest corner of the lake, close to a clear water spring. This material is that of the lowest horizon of JcRw 3. This was early in the loess blowing period. The artifact assemblage became somewhat more varied with very characteristic bipointed laurel leaf-shaped points, flake choppers, burins on blades, multiburins, end scrapers and side-scrapers.

Late in the loess deposition period, buffalo hunters from the south, moved into the savannah grassland of the warm, dry hypsithermal period. The three components at JcRw 3 and the JcRw 7 site are representative of these people. The numerous components and the diversity of tool types indicates a complex sequence for these people over a fairly long period. The latest of these hunting people occupations must have occurred toward the end of this period. The tool assemblages of these Northern Plano people appear typical of the large game hunters, with a variety of stemmed and lancelote points, end scrapers, large side scrapers, gravers, choppers, and flake knives.

At the base of the humus on JcRw 3, overlying the latest of the Plano remnants, were found a number of components varying in character throughout different sections of the site. They will require comparative analysis on an area basis within the site to distinguish individual components. The upper level of JcRw 8 site, JcRw 13 and JcRw 10 sites were all occupied in this period, and will require further excavation.

The 1967 program will be specifically directed toward complete excavation of the main site JcRw 3, and the three sites tested in 1966.

The early man site, JcRw 14, must be excavated during this coming season. The possibility of obtaining a well defined and dated early man site in this northern area will provide a new dimension for comparative analysis of other early sites to the south.

The two main purposes of the project are briefly; to provide a cultural sequence with adequate chronological control, which will allow: (1) an integration and definition of the northern traditions toward this southern border of the area, and (2) to explore their possible relationships on south into the middle of the continent, as well as back to the Straits region and Asia. Such a sequence must be based

on stratigraphy, with ample radiocarbon or other absolute dates. The stratigraphic column that will provide this control for the Fort Liard sequence is that developed from JcRw 3. This site is about 30% excavated and will be completed during the coming season. The excavation depth increases back into the gentle slope of the surface of the site with the result that the area of excavation will be reduced from last years nearly 200 square meters.

Completion of the JcRw 3 excavation will clarify a number of problems which have concerned northern archaeologists. The stratigraphic relationship of the Cordillera below the Plano horizons, establishes the sequential chronology. The Plano horizons of JcRw 3 show an apparent differentiation which should develop as the excavation progresses. The JcRw 7 site appears to be different again from the components of JcRw 3, and excavation will provide another facet to this stratigraphic development of the northern plains buffalo and game hunters.

The most difficult area of definition appears to be that later period represented by the cultural material coming from the top of the soil and beneath the humus. This period of occupation was apparently of considerably duration and much of the site was occupied at one time or another. One such occupation toward the north end of the site may be a Northwest Microblade component close to the Pointed Mountain site in time. Other material shows similarities to the Fisherman Lake phase, coming somewhat later in time. Excavation of JcRw 13 will help clarify this late Northwest Microblade tradition period in the Fisherman Lake area.

PERSONNEL

A. Field

1. Dr. R. S. MacNeish - Project Sponsor
2. J.F.V. Millar - Principal Investigator and Field Supervision
    a. Field assistant
    b. Field laboratory assistant
    c. Foreman
    d. 9 laborers
    e. Cook
3. Dr. O. L. Hughes, Pleistocene Geologist, Geological Survey of Canada.
4. J. Day, Field soils investigator, Department of Agriculture, Ottawa.

B. Laboratory

1. Dr. R. S. MacNeish and J.F.V. Millar in University of Calgary laboratory.
2. Dr. Owen L. Hughes - Pleistocene laboratory, Calgary.
3. J. Day, Department of Agriculture, Ottawa.
4. Dr. L. Hills, Palynologist, University of Calgary.
5. Dr. F. Terentiuk, carbon 14 analysis, Physics Department University of Calgary.
6. Dr. G. Meade, Palaeontologist, University of Calgary.

FACILITIES

Equipment - Laboratory

University of Calgary

Artifact analysis laboratory - Seminov technique
Radiocarbon dating equipment
Soil laboratory

Geological Survey of Canada, Calgary

Palynology laboratory

Equipment - Field

(1) Camp	all of 1966 equipment is stored at Fort Liard or Fisherman Lake. Two additional tents, a stove and a few minor items will be required. One quarter inch plywood will be taken in this season to build floors which will be required for laboratory facilities and cook tent.
(2) Supplies	to be acquired in Fort Nelson and Fort Liard
(3) Archaeological Equipment	most of the equipment is stored in the field. Only replacement items will be required.

LABORATORY ANALYSIS

A small laboratory will be installed for the coming season for field cataloguing and preliminary analysis of all archaeological material Facilities will be included for field preparation of C14 samples, and preliminary investigation of the pollen samples. A preliminary check on specimen soil samples for pH and grain analysis will be made to assist in the field archaeological interpretation.

Archaeological specimens are to be analyzed by the Seminov technique to investigate manufacturing methods and uses.

The material will constitute the basis of a doctoral dissertation by the principal field investigator and will be published in this connection.

Cooperating Scientists

Dr. R. S. MacNeish	Laboratory analysis
J.F.V. Millar	Field excavation and laboratory analysis
Dr. Owen L. Hughes	Pleistocene Geology
J. Day	Soil analysis
Dr. L. Hills	Palynology
Dr. F. Terentiuk	C14 analysis
Dr. G. Meade	Palaeontology

PROJECT SCHEDULE

1967 Schedule-

Calgary-

May 1 - 20th	assembly of all additional equipment and orientation of graduate student assistants. Shipment to Fort Nelson of equipment
May 20-31st	shipment to Fort Liard and movement of personnel to Fort Liard.
June 1	Mobilization of crew and equipment to Fisherman Lake camp.
June 1 - 3rd	Camp installation
June 4 - 30th	Excavation of JcRw 3.
June 18- 30th	Excavation of JcRw 14.
June 20 - 28th	Geological and pedological survey by consultants.
July 1 - 8th	Excavation JcRw 7. Archaeological survey and botanical collection, Fisherman Lake.
July 9 - 17	Excavation JcRw 13
July 18 - 31st	Excavation JcRw 10
August 1 - 3rd	Demobilization to Fort Liard
August 4 - 6th	Demobilization to Fort Nelson
August 7 - 10th-	Demobilization to Calgary.

BUDGET

Supervision			
	Principal Investigator 2 mths @ $500/mth.	$ 1000.00	
	Field assistant, 2 mths @$300/mth.	600.00	
	Field lab ass't. 2 mths. @$200/mth.	400.00	2,000.00
Labour			
	Foreman, 2 mths. @$350/mth.	700.00	
	Labourers, (9) @ 350 hrs, @ $2.00/hr.	6300.00	7,000.00
Equipment			
	Field	300.00	
	Supplies, camp	200.00	
	living	2000.00	2,500.00
Travel and Transportation			
	Aircraft fuel & maintenance	600.00	
	Transportation-		
	consultants	500.00	
	equipment & freight	200.00	
	assistant	400.00	1,700.00
Incidentals			800.00
Total			$ 14,000.00

Date Due

MAR 17 '82			

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MILLAR, J.F.V.
AUTHOR
Fort Liard archaeological project.
TITLE Investigations of early new world migrations in the...

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